EXPLANATION OF THE PLATES.

Plate XX.

Fig. 1. *Pimelodus buckleyi*, p. 275.
2. *Pimelodus* (*Rhamdia*) *longicauda*, p. 275.

Plate XXI.

Fig. 1. *Pimelodus* (*Pseudopimelodus*) *pulcher*, p. 276.
2. *Stygogenes humboldti*, p. 276.
3. *Nannoglanis fasciatus*, p. 278.
4. *Stegophilus punctatus*, p. 279.

Plate XXII.

Chætostomus dermorhynchus, p. 277.

Plate XXIII.

Fig. 1. *Parodon buckleyi*, p. 279.
2. *Piabucina elongata*, p. 280.
3. *Leptagoniates steindachneri*, p. 282.

Plate XXIV.

Sternarchus (*Rhamphosternarchus*) *curvirostris*, p. 282.

3. Note on a Vestigial Structure in the Adult Ostrich representing the Distal Phalanges of Digit III. By Richard S. Wray, B.Sc. (Communicated by Professor Flower.)

[Received February 2, 1887.]

While examining an Ostrich's wing in the fresh state in order to make out the relation of the quill-feathers to the bones, I was struck by observing that the phalanx of the third digit had a large amount of cartilage at its tip. Having another wing available with that part uninjured, I removed the skin covering it, and carefully dissected out the phalanx of digit III. From the tip of this there extends a round band or rod of cartilage about half the length of the first phalanx; at its base it is as broad as the tip of the phalanx, at the other end about one sixteenth of an inch in breadth. Its distal end fades into the connective tissue in that region. When first dissected out, the cartilaginous rod showed no signs of ossification; but when placed in glycerine, the rod became quite transparent, showing a free second phalanx embedded in it, and occupying its proximal third (see fig. 1, p. 284).

The shape of the phalanx of digit III. is often as shown in fig 2, the pointed end being the fused second phalanx, which in adult specimens may be free and embedded in cartilage. The adult Ostrich, therefore, presents the nearest approach to the pentadactyle manus among Birds.

Through the kindness of Mr. G. B. Howes, I have had the opportunity of examining some fore limbs of Ostrich embryos. These (see fig. 3) show a most interesting appearance, the outline of the digits is

clearly seen where they are encased in the skin. The tips of all the digits are free, including digit III., which has its tip free and projecting beyond the wing-fold. On removing the skin and examining the skeleton, phalanx 1 is distinct, then a rod of cartilage extends to the tip of the projecting fold of skin (*a*, fig. 4). This rod of carti-

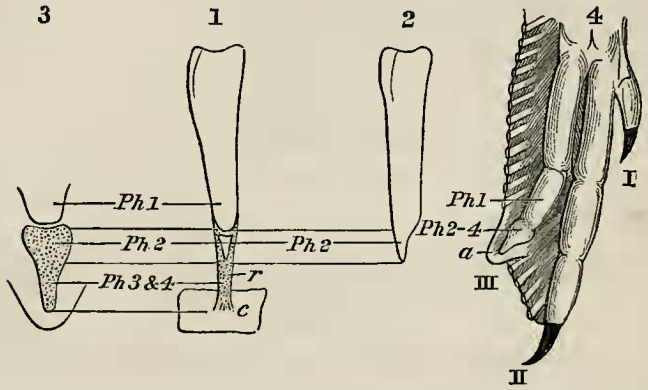

Fig. 1. Phalanx 1 and the vestigial cartilage of digit III., adult Ostrich. *Ph.* 1, 1st phalanx; *Ph.* 2, 2nd phalanx; *r*, vestigial cartilaginous rod; *c*, connective tissue.
Fig. 2. Phalanx of digit III. of another adult Ostrich, showing Ph. 2 ankylosed.
Fig. 3. The distal part of digit III. in the manus of the embryo (fig. 4).
Fig. 4. Ventral view of left manus of embryo. *a*, free tip of digit III.

lage probably represents the remaining phalanges of the digit, which are never definitely differentiated except phalanx 2: this is ossified in the broader basal third of the rod; in the embryo, before ossification commences, the basal part is much the broadest. All this points to the conclusion that this cartilaginous rod is a vestigial structure, representing in addition to the second (ossified in the adult), the third probably, and possibly also the fourth, phalanx of digit III. (see figures 1 and 3).

4. On the Terrestrial Mollusks of the Viti Islands.—Part II.[1]

By Andrew Garrett, of Huahine, Society Islands.
(Communicated by Mr. John H. Ponsonby, F.Z.S.)

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Genus Melampus, Montfort.

1. Melampus luteus, Quoy & Gaimard.

Auricula lutea, Quoy & Gaimard, Voy. Astrol. ii. p. 163, pl. 6. figs. 25–27; Deshayes, Lam. Hist. viii. p. 388; Küster, Auric. p. 39, pl. 6. figs. 1–3; Mousson, Jav. Moll. p. 47, pl. 5. fig. 6.

[1] See Part I., *suprà*, p. 164.